INDEX Volume XV, 1958–59

INDEX Volume XV, 1958-59

Figures in heavy type preceding page references indicate the parts of *The Advancement of Science* in which references will be found.
Title of communications are frequently abbreviated.

ADAMSON, Prof. R. S., Cape as an ancient African flora, **58**, 118, **59**, 294, 297
Advertising, methods of assessing the effectiveness of a campaign, J. Maitland, **59**, 283, **61**, 459
Aerodynamics of wakes, A. J. Taylor-Russell, **59**, 286
African flora, the Cape as an ancient, Prof. R. S. Adamson, **58**, 118, **59**, 294, 297
African mountain flora, tropical, some problems in, Prof. W. Robyns, **59**, 294, **60**, 323
Agriculture, integration with forestry in land use, *see* Forestry, integration with agriculture in land use, **59**, 297
AITKEN, L. B., Industry in relation to water supply, **59**, 282
AITKEN, P. L., Hydro-electric development in Scotland, **59**, 282
ALLIBONE, Dr. T. E., Some aspects of thermo-nuclear research, **58**, 13, **59**, 270
AMBROSE, Dr. E. J., New microscopic filming methods, **59**, 281
Surface contact microscope for studying movements of living cells, **59**, 278
Amphibia, circulation in, and Reptilia, Prof. G. E. H. Foxon, **59**, 279
Analogue computers and transfer function analysers, and their use in nuclear reactor studies, G. J. R. MacLusky, **59**, 285
ANDRY, Dr. R. G., Paternal and maternal roles and delinquency, **59**, 293, **61**, 497
Apathy, antidotes to, Dr. F. W. Crawford, **59**, 217
Archaeology, natural history and experiment in, Dr. P. A. Jewell, **59**, 165, 287
ARCHARD, J. F., Wear of metals, **59**, 271
ASHFORD, J. H., Dioritic rocks of Glen Dubh, Arran, **59**, 277
Assembly of Corresponding Societies, **59**, 244, 302, **60**, 346
conference of delegates, **59**, 244, 302
cultural value of, Lord Boyd Orr, **59**, 244, 302, **60**, 346
Atlantic ends of Europe, Prof. E. Estyn Evans, **58**, 54, **59**, 281
Aviation, physiological problems, **59**, 290
aviation physiology, continuum of, Group Capt. W. K. Stewart, **59**, 290
body temperature in flight, aspects of control of, Dr. D. McK. Kerslake, **59**, 290
future problems in, Sqn. Ldr. T. C. D. Whiteside, **59**, 290
reduced atmospheric pressure on man, effects of, and their prevention, Sqn. Ldr. J. Ernsting, **59**, 290

BAILEY, Sir Edward, Mobilisation in Ireland and sinking olivines in Greenland, **59**, 276
BAKER, H. C., Development and use of technical ideas in a small-firm industry, **59**, 294
BARBER, Dr. M., Genetics of resistance in bacteria, **59**, 295
BARNARD, P. D. W., Notes on petrified Pteridosperm seeds illustrated by some from East Lothian, **59**, 295
BARNES, Dr. D. W. H., Treatment of lethally irradiated mice, **59**, 278, **60**, 409
BARWELL, Dr. F. T., Newer aspects of fluid lubrication, **59**, 271
BEAMENT, Dr. J. W. L., New information on the water-proofing of insects, **59**, 279
BEEDHAM, Dr. G. E., Composition of lamellibranch shell, **59**, 280
Berwickshire, Studies in Lower Carboniferous flora of, A. G. Long, **59**, 294
BIRKS, Dr. J., Well logging, **59**, 276
BLACKETT, Prof. P. M. S., British Association looks ahead, **60**, 363
BOGUE, Dr. J. Yule, Physiology in industry, **59**, 290, **61**, 447
BOND, Dr. G., Incidence and importance of biological fixation of nitrogen, **59**, 295, **60**, 382
Books received, **59**, 188, **60**, 418, **61**, 506
BOOTH, Dr. A. D., Prospects and probabilities in electronic data processing, **59**, 271, **60**, 375
BOTT, Dr. M. H. P., Uplift of granite masses—a problem of isostasy, **59**, 275
BOWDEN, Dr. F. P., Friction and lubrication, introduction, and problems in travelling at 2,000 m.p.h., **59**, 270
BOWES, Dr. D. R., Garnet Isograd in the Braes of Balquhidder, **59**, 277
BOYD ORR, Lord, Cultural value of assembly of corresponding [or local] societies, **59**, 244, 302, **60**, 346
presentation of science: introduction, **59** 244, 302
Bracken poisoning of farm animals, Prof. C. Evans, **59**, 300
Braes of Balquhidder, Garnet Isograd in, Dr. D. R. Bowes, **59**, 277
BRECH, R. J., Economics in business, **59**, 284, **61**, 475
BRENNER, Dr. S., Construction of a bacterial virus, **59**, 288
BRIAN, Dr. P. W., Gibberellic acid, **59**, 296
BRIMBLE, L. J. F., Presentation of science: by scientist to scientists in differing subjects, **59**, 244, 302
British Association for the Advancement of Science, H.R.H. The Duke of Edinburgh, **60**, 309
British Association looks ahead, Prof. P. M. S. Blackett, **60**, 363
BRITTON, E., Educational psychology: the consumer's approach, **59**, 292, 299
BROWN, Prof. A. J., Inflation and the British economy, **58**, 65, **59**, 284
BROWN, D. R., Problems of geophysical prospecting for oil in the Middle East, **59**, 276
BROWNE, B. C., Geodesy and geophysics at Cambridge University, **59**, 239
BUCHTHAL, Prof. F., Electromyography of intrinsic laryngeal muscles in man, **59**, 289
Bukoba district of Tanganyika Territory, changing regional advantages in, D. N. McMaster, **59**, 282
BULLEN, Dr. J. J., Immunity to bacterial infections, **59**, 301
BULLERWELL, Dr. W., Recent geophysical surveys by the Geological Survey, **59**, 275
Business, Science and: a balanced partnership, Sir Alexander Fleck, **58**, 3

CALDER, P. Ritchie, Presentation of science: to adult audiences, **59**, 244, 302
CALLENDER, Miss W. M., Role of social environment in early personality development, **59**, 294
CALNAN, J., Function of palate and pharynx in speech, **59**, 289
CAMPBELL, Dr. J., Fluorine and dental decay: fifty years of research, **59**, 221, 275
CAMPBELL, Dr. J. A., Host parasite relationships in the Diptera, **59**, 302
Cape as an ancient African flora, Prof. R. S. Adamson, **58**, 118, **59**, 294, 297
Carboniferous 'Red Beds', Scottish: a survey of recent work, E. H. Francis, G. I. Lumsden, W. Mykura, W. A. Read, W. Tulloch, **59**, 275
CARTER, Dr. P. T., Recent applications of chemistry to metallurgical problems, **59**, 274
Cellular differentiation, some aspects of, Dr. E. N. Willmer, **58**, 95, **59**, 289
Circulation in Amphibia and Reptilia, recent investigations, Prof. G. E. H. Foxon, **59**, 279
CLARKE, J., Some aspects of the Iron Age in south Scotland, **59**, 287
COBB, Dr. W., Physiology in medical research, **59**, 290, **61**, 442

COHEN, Prof. J., Metaphorical consciousness, **59**, 292
COLBURN, O. H., Breeding productive sheep, **59**, 300
Colour vision, **58**, 104, **59**, 231, 291
  age and, R. Lakowski, **59**, 231, 291
  chemical basis of human, Dr. W. A. H. Rushton, **59**, 231, 291
  and colour blindness, a review of some problems of, Prof. R. W. Pickford, **58**, 104, **59**, 231, 291
  effect of eye movements on, Dr. D. H. Fender, **59**, 231, 291
  trial framework for the study of colour discrimination, Commander Dean Farnsworth, **59**, 231, 291
Commonwealth, scientific co-operation within, H.R.H. The Duke of Edinburgh, **60**, 314
Competition and monopoly in the motor industry, A. Silberston, **59**, 283
Competition in the woollen and worsted industry, G. F. Rainnie, **59**, 284
Comprehension and newspaper correspondence, W. H. N. Hotopf, **59**, 292
Confidence as an integrating concept in psychology and economics, D. C. Duncan, **59**, 292
Coniferous timber, supply and utilisation of fast-grown 59, 298
  anatomical considerations, B. J. Rendle, **59**, 298
  management of, A. Watt, **59**, 298
  market trends, E. G. Richards, **59**, 298
  utilisation and the sawmilling industry, R. Finlay Wilson, **59**, 298
CONN, Prof. J. F. C., Developments in naval architecture, **59**, 285
Control of body temperature in flight, aspects of, Dr. D. McK. Kerslake, **59**, 290
CONWAY, Dr. Elsie, Marine algae in Scotland, **59**, 296
COOPER, Dr. A. J., Growth trends of the glass-house tomato, **59**, 301
Coral reefs, form and biology of, Prof. C. M. Yonge, **59**, 279
CORNFORD, E. C., General aspects of travel at very high speeds with special reference to rockets and satellites, **59**, 284
Corresponding Societies, Assembly of, *see* Assembly of Corresponding Societies, **59**, 244, 302, **60**, 346
COTTON, J. B., Corrosion behaviour of some of the newer metals, **59**, 274
Council's report to the General Committee, 1957–58, **59**, 253
  Annual Meetings, **59**, 256
  biological stations, **59**, 261
  finance, **59**, 254
  lectureships for young scientists, **59**, 263
  Leicester and Leicestershire fund, **59**, 261
  new activities, **59**, 257
  obituary, **59**, 253
  prizes, **59**, 262
  relations with other institutions, **59**, 253
  resolutions and recommendations, **59**, 261
  'Science in Schools', conference, **59**, 264
  scientific films, **59**, 261
  UNESCO, **59**, 254
COWAN, Dr. N., Retirement: a critical phase in the life of man, **59**, 293
CRAWFORD, Dr. F. W., Antidotes to apathy, **59**, 217, 299
Crystal physics, **59**, 273, **61**, 507
  diamonds, man-made, Dame Kathleen Lonsdale, **59**, 273, **61**, 507
  diamonds in the sky, Dr. H. Judith Grenville-Wells, **59** 273 **61**, 507
  imperfect crystal, Dr. J. W. Menter, Dr. P. B. Hirsch, **59**, 273, **61**, 507
  molecules a million times larger than life, Dr. I. M. Dawson, Dr. D. H. Watson, **59**, 273, **61**, 507
Crystallography, applications to chemistry, **59**, 273, **60**, 351
  how molecules fit together, H.M. Powell, **59**, 273, **60**, 351
  inorganic crystallography, rebirth of, P. Pauling, **59**, 273, **60**, 351
  molecules, measurement of by X-rays, Prof. J. Monteath Robertson, **59**, 273, **60**, 351
Cultural value of local societies, Lord Boyd Orr, **59**, 244, 302, **60**, 346
CUMMINGS, Dr. R. H., Sequence of foraminiferal assemblages in the Lower Carboniferous, **59**, 277
CUTHBERTSON, Dr. D. P., Careers for the physiologist in agricultural research, **59**, 290, **61**, 444
  Digestion in the ruminant, **58**, 140, **59**, 300
Cytological and morphological studies, with particular reference to the Pteridophyta, *see* Pteridophyta, morphological and cytological studies, **59**, 294

DALE, H., Fault-finding, **59**, 293
Darwin centenary: **59**, 287
  archaeology, natural history and experiment in, Dr. P. A. Jewell, **59**, 165, 287
  Australopithecus at Sterkfontein, significance of stone tools found in association with, Dr. K. P. Oakley, **59**, 287
  Darwinism and the concept of social evolution, D. G. MacRae, **59**, 287
  A. R. Wallace, apes and ideas in Borneo during one century of evolution, T. Harrisson, **59**, 287
Darwin in Scotland, Dr. W. E. Swinton, **59**, 201, 244, 302
Darwinism to-day, C. J. Perrin, **61**, 468
DAWS, Dr. P. P., Selection of ship-building and marine engineering apprentices, **59**, 292
DAWSON, Dr. I. M., Molecules a million times larger than life, **59**, 273, **61**, 507
DAY, Dr. R. P., Genetics of host and pathogen among diseases of higher plants, **59**, 295
DEACON, Dr. G. E. R., National Institute of Oceanography, **59**, 240
DEE, Prof. P. I., Physics of quanta, **59**, 269
Delinquency, **59**, 293, **61**, 497
  boys on probation: maladjusted or normal? Dr. D. H. Stott, **59**, 293, **61**, 497
  paternal and maternal roles and, Dr. R. G. Andry, **59**, 293, **61**, 497
  patterns of post-war juvenile and young adult crime, L. T. Wilkins, **59**, 293, **61**, 497
  young delinquent in his social setting, Prof. T. Ferguson, **59**, 293, **61**, 497
DIAMOND, D. R., Urban morphology of Glasgow region, **59**, 281
DICKIE, M. A. M., Rural development surveys in Scotland, **59**, 298
Digestion in the ruminant, Dr. D. P. Cuthbertson, **58**, 140, **59**, 300
Dioritic rocks of Glen Dubh, Arran, J. H. Ashford, **59**, 277
Directory of Natural History and Field Study Societies, **59**, 164, **60**, 430, **61**, 488
DONNITHORNE, Audrey G., Economic background to the innovations in the rubber manufacturing industry in Britain, **59**, 284
DREVER, Dr. H. I., Picritic facies of the Shiant Isles Sill, **59**, 276
DUNCAN, D. C., Confidence as an integrating concept in psychology and economics, **59**, 292
DUNCAN, Prof. W. J., High-speed flight; introduction, **59**, 284
DUNLOP, Dr. Grace N., Shell development in *Spirifer trigonalis*, **59**, 277

Early seeds and ovules, structure and evolution of, **59**, 294
  introduction, Prof. J. Walton, **59**, 294
  Lower Carboniferous flora of Berwickshire, A. G. Long, **59**, 294
  Lower Carboniferous fructifications from the Kilpatrick Hills, D. L. Smith, **59**, 295
  petrified Pteridosperm seeds illustrated by some from East Lothian, P. D. W. Barnard, **59**, 295
Earth's Crust, beneath the, Prof. L. R. Wager, **58**, 31, **59**, 276
Economics in business, R. J. Brech, **59**, 284, **61**, 475
Economics of education in Britain, J. Wiseman, **59**, 283
EDINBURGH, H.R.H. THE DUKE OF, The British Association for the Advancement of Science, **60**, 309
  Scientific co-operation within the Commonwealth, **60**, 314
Education facilities in small firms, **59**, 299
  training and education in medium and small firms, J. E. C. McCandlish, **59**, 299
  training of girls, Miss A. G. Shaw, **59**, 299
Education and industry, the partnership between, Sir Willis Jackson, **58**, 128, **59**, 299
Education in a technological age, **59**, 298, 299, 300
  lesser and greater tasks, Sir James J. Robertson, **59**, 299
  professional education of teachers, Prof. W. O. Lester Smith, **59**, 300, **60**, 329

Education in a technological age—*continued*
science classes for arts students, Dr. A. Kent, **59,** 299
university aspect, Prof. F. A. Vick, **59,** 298
work of a bilateral (technical and modern) secondary school in a new town, G. B. C. Palmer, **59,** 300, **61,** 492
Educational psychology: the consumer's approach, E. Britton, **59,** 292, 299
research in: methods and findings, R. Edwards, **59,** 291, 299
in retrospect, Dr. S. Wiseman, **59,** 292, 299
usefulness to the teacher, 59, 291, 299
EDWARDS, J., Nuclear propulsion, **59,** 285
EDWARDS, R., Research in educational psychology: methods and findings, **59,** 291, 299
E. E. G., personality correlates of, J. E. Orme, **59,** 291
ELBOURNE, K. B., Usefulness of digital computers in business problems, **59,** 272
Electron microscope, living machinery and, Dr. C. F. A. Pantin, **60,** 419
Electronic computers, use of, **59,** 271, **60,** 375
data processing, prospects and probabilities in, Dr. A. D. Booth, **59,** 271, **60,** 375
digital computers, usefulness of in business problems, K. B. Elbourne, **59,** 272
five days in the life of, R. L. Michaelson, **59,** 272
information retrieval, principles of, E. A. Newman, **59,** 272
ELWELL, Miss F. R., Presentation of science: through medium of television, **59,** 245, 302
EMELEUS, Prof. H. J., Transuranic elements, **58,** 23, **59,** 272
EMERY, F. V., 'Description of Scotland' prior to 'Statistical Accounts', **59,** 282
Energy, storage of, R. G. Voysey, **59,** 285
Engineer, nuclear power and the, Sir Christopher Hinton, **59,** 173
ERNSTING, Sqn. Ldr. J., Effects of reduced atmospheric pressure on man and their prevention, **59,** 290
EVANS, Prof. C., Bracken poisoning of farm animals, **59,** 300
EVANS, Prof. E. Estyn, Atlantic ends of Europe, **58,** 54, **59,** 281
Rural settlement in Ireland and W. Britain: introduction **60,** 333

FAIRHURST, Dr. H., Evolution of settlement in W. Scotland, **59,** 282, **60,** 334
FALCON, N. L., Advancement of geological science by oil exploration, **59,** 276
FARNSWORTH, Cdr Dean, Trial framework for the study of colour discrimination, **59,** 231, 291
FELL, Dr. Honor B., Role of vitamin A in differentiation, **59,** 289
FENDER, Dr. D. H., Effect of eye movements on colour vision, **59,** 231, 291
FERGUSON, Prof. T., Young delinquent in his social setting, **59,** 293, **61,** 497
Field studies in the Loch Katrine area, **59,** 244, 302
Dalradian rocks and an interpretation of the geological structures around Loch Ard and Loch Katrine, Dr. S. M. K. Henderson, **59,** 244, 302
Scottish Field Studies Association. Flora of the Trossachs, B. W. Ribbons, **59,** 244, 302
FINNISTON, Dr. H. M., Newer metals in industry, **59,** 274
FLECK, Sir Alexander, Science and business: a balanced partnership, **58,** 3
FLEURE, Prof. H. J., Rural settlement—chairman's introduction, **59,** 282, **60,** 333
Fluorine compounds, *see* Organic fluorine compounds, **59,** 274
Fluorine and dental decay: fifty years of research, J. Campbell, **59,** 221, 275
FOISTER, Dr. C. E., Mycological flora of Scotland, **59,** 296
Folk life, the study of: and its part in the defence of civilisation, Dr. Iorwerth C. Peate, **58,** 86, **59,** 287
Forest tree seeds, assessment and improvement of quality of, **59,** 297
assessment and improvement of the sowing value of, G. D. Holmes, **59,** 297
genetic quality of, J. D. Matthews, **59,** 297
value of improved tree seed and quality control in forest practice, J. R. Thom, **59,** 297
Forestry, integration with agriculture in land use, **59,** 297, 298
factor's view of, R. M. Hamilton, **59,** 298
Forestry, integration with agriculture in land use—*continued*
integration of forestry and the hill sheep farm, J. A. B. Macdonald, **59,** 298
landowner's view of, Sir James Denby Roberts, **59,** 297
rural development surveys in Scotland, M. A. M. Dickie, **59,** 298
FOWDEN, Dr. L., Incorporation of inorganic nitrogen compounds into amino-acids and proteins of plants, **59,** 295, **60,** 392
FOXON, Prof. G. E. H., Recent investigations on the circulation in Amphibia and Reptilia, **59,** 279
FRANCIS, E. H., Scottish Carboniferous 'Red Beds' survey of recent work, **59,** 275
FREEMAN, Dr. G. G., Silicone polymers: an introduction to their properties, **59,** 272, **60,** 397
Freshwater Biological Association, **59,** 280, 296, **61,** 521
algae of Windermere, investigations on, Dr. J. W. G. Lund, **59,** 280, 296, **61,** 530
fish populations in Windermere, experiments with, E. D. Le Cren, **59,** 280, 296, **61,** 534
history of, Prof. W. H. Pearsall, **59,** 280, 296, **61,** 521
lakes, physics and chemistry of, Dr. C. H. Mortimer, **59,** 280, 296, **61,** 524
Friction and lubrication, some modern problems, **59,** 270
fluid lubrication, newer aspects of, Dr. F. T. Barwell, **59,** 271
introduction, and problems in travelling at 2,000 m.p.h., Dr. F. P. Bowden, **59,** 270
lubrication in the nuclear age, Dr. C. G. Williams, **59,** 270
rolling, skidding and sliding, Dr. D. Tabor, **59,** 270
wear of metals, J. F. Archard and Dr. W. Hirst, **59,** 271
FULLERTON, B., Pattern of 'service' industries in N.-E. England, **59,** 283

GEDDES, Dr. Arthur, Scotland's 'Statistical Accounts' of Parish, County and Nation: c. 1790–1824 and 1836–40, **59,** 282
Genetical control and nature of resistance in living organisms, *see* Resistance in living organisms, nature and genetical control of, **59,** 295
Geography in medieval Scottish universities, Prof. A. Stevens, **59,** 282
Geological Survey work in the Glasgow region, Dr. A. G. MacGregor, **59,** 275
Geology of the Glasgow district, Prof. T. N. George, **59** 275
Geology and oil, **59,** 276
contribution of to discovery and development of oilfields, F. E. Wellings, **59,** 276
geophysical prospecting for oil in the Middle East, problems of, D. R. Brown, **59,** 276
microfacies, Dr. A. H. Smout, **59,** 276
oil exploration, advancement of geological science by, N. L. Falcon, **59,** 276
well logging, Dr. J. Birks, **59,** 276
Geophysics, applied, **59,** 275
Ayrshire, gravity survey of, A. C. McLean, **59,** 275
Geological Survey, recent geophysical surveys by, Dr. W. Bullerwell, **59,** 275
geophysical exploration for oil in Great Britain, Dr. D. T. Germain-Jones, **59,** 275
uplift of granite masses—a problem of isostasy, Dr. M. H. P. Bott, **59,** 275
GEORGE, Prof. T. N., Geology of the Glasgow district, **59,** 275
GERARD, Prof. R. W., Physiology in America, **61,** 451
GERMAIN-JONES, Dr. D. T., Geophysical exploration for oil in Great Britain, **59,** 275
Ghana, *see* Personal problems and social change in, **59,** 293
Gibberellic acid, Dr. P. W. Brian, **59,** 296
Glasgow, mathematics in, in the eighteenth century, Prof. I. M. Sneddon, **59,** 271
Glasgow Meeting, 1958, **59,** 157
officers at, **59,** 266
Glasgow region, **59,** 281
Clyde and its part in industrial and commercial development of, H. A. Moisley, **59,** 281
geological survey work in, *see* Geological Survey work in Glasgow region, Dr. A. C. MacGregor, **59,** 275
geology of, *see* Geology of the Glasgow district, Prof. T. N. George, **59,** 275
Prof. Ronald Miller, **59,** 281
urban morphology of, D. R. Diamond, **59,** 281

Glen Dubh, Arran, dioritic rocks of, J. H. Ashford, **59**, 277
Glen Lyon, deformation studies in Carn Mairg Quartzite of, D. M. Ramsay, **59**, 277
GLENTWORTH, Dr. R., Review of the distribution of soil types of Scotland, **59**, 296
GOLDRING, R., Tournaisian Trilobites, **59**, 277
GORRIE, Dr. R. Maclagan, Need for river-flow studies, **59**, 282
Grädmann's steppe-heath theory re-examined: primeval landscape of Middle Europe, Dr. Karl A. Sinnhuber, **59**, 282
Grass tetany, Dr. J. A. F. Rook, **59**, 300
GRAY, Dr. J. A. B., Physiology in universities, **59**, 290, **61**, 438
GREEN, F. H. W., Evaporation and land use in water conservation studies, **59**, 282
Greenland, sinking olivines in and mobilisation in Ireland, Sir Edward Bailey, **59**, 276
GRENVILLE-WELLS, Dr. H. Judith, Diamonds in the sky, **59**, 273, **61**, 507
GUNN, Prof. J. C., Non-conservation of parity, **59**, 259, **61**, 453
GUTTRIDGE, Dr. C. G., Use of controlled environment chambers to investigate the physiology of the strawberry, **59**, 301

HALE, Dr. A. J., Cell weights and measures, **59**, 278
HALLY, Dr. A. D., Biological fabrics, **59**, 279
HAMILTON, R. M., Factor's view of integration of agriculture and forestry, **59**, 298
HARRIS, A. L., Aspects of evolution of quartz girdles, **59**, 278
HARRISSON, T., Borneo man at Niah great cave, **59**, 288
Breeding periodicity and related problems of two vertebrate animals in equatorial Borneo, **59**, 280
A. R. Wallace, apes and ideas in Borneo during one century of evolution, **59**, 287
HAY, Prof. R., Recent applications of chemistry to metallurgical problems, **59**, 274
Heat and the engineer, Prof. O. A. Saunders, **58**, 76, **59**, 285
Heat transfer and pressure loss with gas flow across banks of tubes, experimental determination of, J. M. Miller, G. F. S. Reising, **59**, 285
HENDERSON, A. E., Adaptations of freshwater snails, **59**, 281
HENDERSON, Dr. S. M. K., Field studies in Loch Katrine area: brief account of the Dalradian rocks and interpretation of the geological structures around Loch Ard and Loch Katrine, **59**, 244, 302
HENDRIE, Prof. D. S., Science and hill farming, **59**, 189, 301
Highland Schists, **59**, 277
Carn Mairg Quartzite of Glen Lyon, deformation studies in, D. M. Ramsay, **59**, 277
Dalradian rocks of Western Scotland, succession and sedimentary facies in, Dr. N. Rast, Dr. A. J. Smith, **59**, 277
Garnet Isograd in Braes of Balquhidder, Dr. D. R. Bowes, **59**, 277
'slides' in Scottish hydro-electric tunnels, occurrence of, G. S. Johnstone, **59**, 277
High-speed flight, **59**, 284
aerodynamic aspects of, L. F. Nicholson, **59**, 284
introduction, Prof. W. J. Duncan, **59**, 284
travel at very high speeds with special reference to rockets and satellites, E. C. Cornford, **59**, 284
HILL, Prof. A. V., Physiology as an education and as a career: introduction, **59**, 290, **61**, 435
Hill farming, science and, **59**, 189, 301
economics of, J. B. McCreath, **59**, 189, 198, 301
health in hill flocks, A. L. Wilson, **59**, 189, 196, 301
hill land improvement, Dr. R. F. Hunter, **59**, 189, 194, 301
review of problems, A. R. Wannop, 59, 189, 301
HINTON, Sir Christopher, Nuclear power and the engineer, **59**, 173
HIRSCH, Dr. P. B., Imperfect crystal, **59**, 273, **61**, 507
HIRST, Dr. W., Wear of metals, **59**, 271
HOLMES, G. D., Assessment and improvement of sowing value of seeds, **59**, 297
Horticulture: the plant and its environment, **59** 301, **60**, 425
Horticulture—*continued*
chrysanthemum growing, effect of environment on economics of, A. B. Webster, **59**, 301
controlled environment chambers to investigate the physiology of the strawberry, use of, Dr. C. G. Gutteridge, **59**, 301
controlled environments in experimental work, Prof. J. P. Hudson, **59**, 301, **60**, 425
growth trends of the glasshouse tomato, Dr. A. J. Cooper, **59**, 301
Host-parasite relationships, **59**, 301, 302, **60**, 379
bacteria and insects, Dr. J. R. Norris, **59**, 302, **60**, 379
in the Diptera, Dr. J. A. Campbell, **59**, 302
immunity to bacterial infections, Dr. J. J. Bullen, **59**, 301
vaccines against parasitic worms, Dr. W. Mulligan, **59**, 301
HOTOPF, W. H. N., Comprehension and newspaper correspondence, **59**, 292
HUDSON, Prof. H. P., Use of controlled environments in experimental work, **59**, 301, **60**, 425
HUGHES, J. S., International seismological summary, **59**, 238
HUNTER, Dr. R. F., Hill land improvement, **59**, 189, 194, 301
HUNTER, Dr. W. D. Russell, Evolution of Gastropoda in freshwaters, **59**, 281
HUTCHINGS, A. M. J., Plant ecology of heather, moor and bog, **59**, 245, 303

Incised Meanders and Pliocene Platforms, Dr. A. Lamont, **59**, 277
India, visit of H.R.H. The Duke of Edinburgh, **60**, 309
Industrial research, choice and valuation in, Dr. R. M. Lodge, **59**, 211, 284
Industry and education, the partnership between, Sir Willis Jackson, **58**, 128, **59**, 299
Inflation and the British economy, Prof. A. J. Brown, **58**, 65, **59**, 284
INGLIS, Dr. N. P., Corrosion behaviour of some of the newer metals, **59**, 274
INGRAM, Dr. D. J. E., Technical applications of microwave physics, **59**, 271
Instrumentation problems associated with nuclear power stations, Dr. D. Taylor, **59**, 285
Ireland, mobilisation in, and sinking olivines in Greenland, Sir Edward Bailey, **59**, 276
ISAACS, Dr. A., How to interfere with a virus, **59**, 288
Islay: a Hebridean exception, Miss Margaret Storrie, **59**, 283

JACKSON, Miss C. E., Genetic basis of resistance mechanisms in mosquitoes, **59**, 295
JACKSON, Sir Willis, The partnership between industry and education, **58**, 128, **59**, 299
JAHODA, Dr. G., Personal problems and social change in Ghana, **59**, 293
JAMES, Dr. E. G., P–N junctions, preparation and properties of, **59**, 269
JEFFREYS, Sir H., Seismological investigations: imperfections of elasticity in the shell, **59**, 240
times of P about 20°, **59**, 240
JENKINS, J. G., Sledges and wheeled vehicles, **59**, 288
JEWELL, Dr. P. A., Natural history and experiment in archaeology, **59**, 165, 287
Job satisfaction, Miss M. Rodger, **59**, 299
JOHNSTONE, G. S., 'slides' in Scottish hydro-electric tunnels, **59**, 277
JONES, Glanville R. J., Rural settlements in Wales, **59**, 282, **60**, 338
JONES, Dr. R., Geographical distribution of professional persons: with special reference to place-attitudes of intending teachers in Scotland, **59**, 283

KANWISHER, Dr. J. W., Freezing problems of marine life, **59**, 278, **60**, 409
KAY, Prof. H. D., Nutrition and milk production in cattle, **59**, 300
KENT, Dr. A., Science classes for arts students, **59**, 299
KERSLAKE, Dr. D. McK., Some aspects of control of body temperature in flight, **59**, 290
KING, G., P–N junctions and transistors, **59**, 270
Kintyre: a Highland exception, Leslie Symons, **59**, 283

KLECZKOWSKI, Dr. A., Resistance to virus diseases, **59**, 295
KLEIN, Dr. Josephine, Analysis of the literature on the family in post-war Britain, **59**, 293

LADEFOGED, P., Speech as a physiological process, **59**, 289
LAKOWSKI, R., Age and colour vision, **59**, 231, 291
LAMONT, Dr. A., Pliocene Platforms and Incised Meanders **59**, 277
Land use, *see* Forestry, integration with agriculture in land use, **59**, 297
LANGFORD, W. J., School mathematics in the twentieth century, **59**, 272
LAWRENCE, Dr. B. E., Teaching of mathematics—general discussion, **59**, 272
LEAF, Dr. G., Biochemical aspects of the fixation of atmospheric nitrogen, **59**, 295, **60**, 386
LE CREN, E. D., Experiments with fish populations in Windermere, **59**, 280, 296, **61**, 534
LEECH, H. R., Industrial advance of fluorine, **59**, 274
LEVY, Prof. H., Purpose and practice in mathematical teaching, **59**, 272
LILEY, B. S., Sceptre: theory and experiment, **59**, 270
LIVENS, R. G., Recent researches into the Stone Age in Scotland, **59**, 286
Living machinery and the electron microscope, Dr. C. F. A. Pantin, **60**, 419
Local societies and archaeological research in Scotland, J. G. Scott, **59**, 245, 302
  cultural value of, Lord Boyd Orr, **59**, 244, 302, **60**, 346
LODGE, G. A., Nutrition and milk production in sows, **59**, 300
LODGE, Dr. R. M., Choice and valuation in industrial research, **59**, 211, 284
LONG, A. G., Studies in the Lower Carboniferous flora of Berwickshire, **59**, 294
LONSDALE, Dame Kathleen, Man-made diamonds, **59**, 273, **61**, 507
Losses in refrigeration compressors, measurement of, Dr. S. Forbes Pearson, **59**, 286
Low temperatures, acclimatisation of insects to, Dr. K. Mellanby, **59**, 278, **60**, 409
  life at, **59**, 278, **60**, 409
  mammals, resuscitation of frozen, Dr. Audrey U. Smith, **59**, 278, **60**, 409
  marine life, freezing problems of, Dr. J. W. Kanwisher, **59**, 278, **60**, 409
  mice, treatment of lethally irradiated, Dr. D. W. H. Barnes, **59**, 278, **60**, 409
  some biological effects of, Dr. A. S. Parkes, **58**, 46, **59**, 278
  sperm, freezing and storage of, Dr. C. Polge, **59**, 278, **60**, 409
Lower carboniferous palaeontology, *see* Palaeontology, lower carboniferous, **59**, 277
LUMSDEN, G. I., Scottish Carboniferous 'Red Beds'; survey of recent work, **59**, 275
LUND, Dr. J. W. G., Investigations on the algae of Windermere, **59**, 280, 296, **61**, 530

MCCANCE, Sir Andrew, Recent trends in metallurgy: introduction, **59**, 274
MCCANDLISH, J. E. C., Training and education in medium and small firms, **59**, 299
M'COMISKY, J. G., Selection of ship-building and marine engineering apprentices, **59**, 292
MCCREATH, J. B., Economics of hill farming, **59**, 189, 198, 301
MCCREDIE, D. W., Breeding habits of the hen harrier in south-western Perthshire, **59**, 245, 303
MACDONALD, J. A. B., Integration of forestry and the hill sheep farm, **59**, 298
MACGREGOR, Dr. A. G., Geological Survey work in the Glasgow region, **59**, 275
MACKECHNIE, R., Some Scottish plants, **59**, 296
MCKENZIE, R. M., Inspector-workman relationship, **59**, 292
MCLEAN, A. C., Gravity survey of Ayrshire, **59**, 275
MACLEAN, C. I., Traditional Scottish beliefs in the modern age, **59**, 287
MACLUSKY, G. J. R., Analogue computers and transfer function analysers, and their use in nuclear reactor studies, **59**, 285
MCMASTER, D. N., Changing regional advantages in Bukoba district of Tanganyika Territory, **59**, 282
MACRAE, D. G., Darwinism and the concept of social evolution, **59**, 287
MCWHIRTER, R. W. P., Experiments with 'Zeta'—methods to determine properties of plasma at thermonuclear temperatures, **59**, 270
MAITLAND, J., Methods of assessing the effectiveness of an advertising campaign, **59**, 283, **61**, 459
Management subjects in British universities, teaching of, Dr. F. P. G. Whitaker, **59**, 284
MANTON, Prof. K., Cytology of the Pteridophyta, **59**, 294
MARIE JOSEPHINE, Sister, Young budgerigars, **59**, 279
Marine biology at Millport, Dr. C. H. Mortimer, **59**, 245, 302
Mathematics in Glasgow in the eighteenth century, Prof. I. M. Sneddon, **59**, 271
Mathematics, teaching of, **59**, 272
  for the age of science and technology, Prof. L. Rosenhead, **59**, 272
  general discussion, Dr. B. E. Lawrence, **59**, 272
  learning from mistakes, Dr. E. A. Maxwell, **59**, 272
  purpose and practice in, Prof. H. Levy, **59**, 272
  school mathematics in the twentieth century, W. J. Langford, **59**, 272
MATTHEWS, J. D., Genetic quality of forest tree seeds, **59**, 297
MATTHEWS, Prof. J. R., Scottish flora—flowering plants, **59**, 296
MAXWELL, Dr. E. A., Learning from mistakes, **59**, 272
MEDWAY, Lord, Animal life and prehistory, **59**, 288
  Life by the million, **59**, 288
MELLANBY, Dr. K., Life at low temperatures, **60**, 409
  acclimatisation of insects to, **59**, 278, **60**, 409
MENTER, Dr. J. W., Imperfect crystal, **59**, 273, **61**, 507
Metallurgy, recent trends, **59**, 274
  introduction, Sir Andrew McCance, **59**, 274
  newer metals, corrosion behaviour of, Dr. N. P. Inglis, J. B. Cotton, **59**, 274
  newer metals in industry, Dr. H. M. Finniston, Dr. F. Murray, **59**, 274
  recent applications of chemistry to, Prof. R. Hay, Dr. P. T. Carter, **59**, 274
Metaphorical consciousness, Prof. J. Cohen, **59**, 292
Metaplasia in an Amoeba (film), Dr. E. N. Willmer, **59**, 289
MICHAELSON, R. L., Five days in the life of a computer, **59**, 272
Microscopy, progress in, **59**, 278
  biological fabrics, Prof. G. M. Wyburn, Dr. A. D. Hally, **59**, 279
  cell weights and measures, Dr. A. J. Hale, **59**, 278
  sections, cutting of, Dr. H. F. Steedman, **59**, 279
  surface contact microscope for studying movements of living cells, Dr. E. J. Ambrose, **59**, 278
Microwave physics, **59**, 271
  application of, to the study of solid states, Dr. K. W. H. Stevens, **59**, 271
  microwave technology, applications of atomic and molecular resonance phenomena to, I. M. Ross, **59**, 271
  technical applications of, Dr. D. J. E. Ingram, **59**, 271
Middle East, problems of geophysical prospecting for oil, D. R. Brown, **59**, 276
Middle Europe, primeval landscape of: Gradmann's steppe-heath theory re-examined, Dr. Karl A. Sinnhuber, **59**, 282
Milk production and nutrition, **59**, 300
  breeding productive sheep, O. H. Colburn, **59**, 300
  in cattle, Prof. H. D. Kay, **59**, 300
  in sows, G. A. Lodge, **59**, 300
MILLER, J. M., Experimental determination of heat transfer and pressure loss with gas flow across banks of tubes, **59**, 285
MILLER, Prof. Ronald, Glasgow region, **59**, 281
MITCHELL, Dr. R. L., Trace element problems in Scottish soils, **59**, 297
MITCHELL, W. A., Mineralogical aspects of soil types in Scotland, **59**, 297
MOISLEY, H. A., River Clyde and its part in industrial and commercial development of Glasgow, **59**, 281
Molecules a million times larger than life, Dr. I. M. Dawson, Dr. D. H. Watson, **59**, 273 **61**, 507
Molluscs, aspects of evolution of form and function in, **59**, 280, 281
  form and evolution in, Prof. C. M. Yonge, **59**, 280

Molluscs—*continued*
freshwater snails, some adaptations of, A. E. Henderson, **59**, 281
gastropoda, evolution in freshwaters, Dr. W. D. Russell Hunter, **59**, 281
lamellibranch shell, composition of, Dr. G. E. Beedham, **59**, 280
lamellibranchs, form and function in, G. Owen, **59**, 280
Moray House verbal reasoning tests, standardisation errors, A. E. G. Pilliner, **59**, 292
Morphological and cytological studies, with particular reference to the Pteridophyta, *see* Pteridophyta, morphological and cytological problems, **59**, 294
MORRIS, M., Presentation of science: to junior audiences, **59**, 244, 302
MORRIS, Dr. R., Aspects of migration in lampreys, **59**, 279
MORTIMER, Dr. C. H., Marine biology at Millport, **59**, 245, 302
Physics and chemistry of lakes, **59**, 280, 296, **61**, 524
MULLIGAN, Dr. W., Vaccines against parasitic worms, **59**, 301
MURRAY, Dr. P., Newer metals in Industry, **59**, 274
MYKURA, W., Scottish Carboniferous 'Red Beds': survey of recent work, **59**, 275

Natural history and experiment in archaeology, Dr. P. A. Jewell, **59**, 165, 287
Navigation, radio waves for, *see* Radio waves for position finding and navigation, **59**, 286
NATTO, J. C., Work of 'Discovery II', **59**, 245, 303
Naval architecture, developments in, Prof. J. F. C. Conn, **59**, 285
NEWMAN, E. A., Principles of information retrieval, **59**, 272
Niah great cave, Sarawak, **59**, 288
animal life and prehistory, Lord Medway, **59**, 288
Borneo man at Niah great cave, T. Harrisson, **59**, 288
life by the million, Lord Medway, **59**, 288
NIBLETT, Prof. W. R., Hall of Residence, **59**, 299
NICHOLL, A. J., Plant ecology of heather, moor and bog, **59**, 245, 303
NICHOLSON, L. F., Aerodynamic aspects of high-speed flight, **59**, 284
NICOL, A., Production of special steels, **59**, 245, 303
Nitrogen metabolism: **59**, 295, **60**, 382
biochemical aspects of nitrogen fixation, Dr. G. Leaf, **59**, 295, **60**, 386
biological fixation of nitrogen, incidence and importance of, Dr. G. Bond, **59**, 295, **60**, 382
inorganic nitrogen compounds, incorporation of, into amino-acids and proteins of plants, Dr. L. Fowden, **59**, 295, **60**, 392
Non-conservation of parity, Prof. J. C. Gunn, **59**, 269, **61**, 453
NORRIS, Dr. J. R., Bacteria and insects, **59**, 302, **60**, 379
Nuclear power and the engineer, Sir Christopher Hinton, **59**, 173
Nuclear power stations, instrumentation problems, Dr. D. Taylor, **59**, 285
Nuclear propulsion, J. Edwards, **59**, 285
Nuclear reactor studies, use of analogue computers and transfer function analysers, Dr. G. J. R. MacLusky, **59**, 285
Nuclear reactors, control of, J. Walker, **59**, 285
Nutrition, *see* Milk production and, **59**, 300

OAKLEY, Dr. K. P., Significance of stone tools found in association with *Australopithecus* at Sterkfontein, **59**, 287
Officers and Council of the British Association, 1958, **58**, 2
1958–59, **59**, 156, 255
1959, **60**, 307, **61**, 433
Oil, geology and, *see* Geology and oil, **59**, 276
Organic fluorine compounds—the taming of an element, **59**, 274
fluorine and dental decay: fifty years of research, Dr. John Campbell, **59**, 221, 275
industrial advance of, H. R. Leech, **59**, 274
physiological properties of toxic organic compounds containing, Dr. B. C. Saunders, **59**, 274
fluorocarbons: a new branch of organic chemistry, Dr. J. C. Tatlow, **59**, 274
ORME, J. E., Personality correlates of the E.E.G., **59**, 291
OSBORNE, Dr. R. H., Geographical distribution of professional persons: with special reference to place-attitudes of intending teachers in Scotland, **59**, 283
Ovules, *see* Early seeds and ovules, **59**, 294
OWEN, G., Form and function in lamellibranchs, **59**, 280
OWEN, T. M., Folk customs in Wales, **59**, 287

PADDOCK, N. L., Phosphonitrilic halides: aromatics without carbon, **59**, 272
PAGE, Dr. H. E., Social-psychological research in the United States, **59**, 293
Pakistan, visit of H.R.H. The Duke of Edinburgh, **60**, 309, 314
Palaeontology, lower carboniferous, **59**, 277
foraminiferal assemblages in Lower Carboniferous, sequence of, Dr. R. H. Cummings, **59**, 277
Spirifer trigonalis, shell development in, Dr. Grace N. Dunlop, **59**, 277
Trilobites, tournaisian, R. Goldring, **59**, 277
PALMER, G. B. C., Work of a bilateral (technical and modern) secondary school in a new town, **59**, 300, **61**, 492
PANTIN, Dr. C. F. A., Living machinery and the electron microscope, **60**, 419
Parity, non-conservation of, Prof. J. C. Gunn, **59**, 269, **61**, 453
PARKES, Dr. A. S., Some low temperatures, biological effects of, **58**, 46, **59**, 278
PAULING, P., Rebirth of inorganic crystallography, **59**, 273, **60**, 351
PAYNE, F. G., Retention of simple agricultural techniques, **59**, 288
PEARSALL, Prof. W. H., History of the Freshwater Biological Association, **59**, 280, 296, **61**, 521
PEARSON, Dr. S. Forbes, Measurement of losses in small refrigeration compressors, **59**, 286
PEATE, Dr. Iorwerth C., The study of folk life, and its part in the defence of civilisation, **58**, 86, **59**, 287
PERRIN, C. J., Darwinism today, **61**, 468
Personality correlates of the E.E.G., J. E. Orme, **59**, 291
Phosphonitrilic halides: aromatics without carbon, N. L. Paddock, **59**, 272
Physiology as an education and as a career, **59**, 290, **61**, 435
introduction, Prof. A. V. Hill, **59**, 290, **61**, 435
careers for the physiologist in agricultural research, Dr. D. P. Cuthbertson, **59**, 290, **61**, 444
in America, Prof. R. W. Gerard, **61**, 451
in industry, Dr. J. Yule Bogue, **59**, 290, **61**, 447
in medical research, Dr. W. Cobb, **59**, 290, **61**, 442
in schools, H. P. Ramage. **59**, 290, **61**, 440
training of physiologists, Prof. D. H. Smyth, **59**, 290, **61**, 449
in universities, Dr. J. A. B. Gray, **59**, 290, **61**, 438
PICKFORD, Prof. R. W., Colour vision and colour blindness, a review of some problems of, **58**, 104, **59**, 231, 291
Picritic facies of the Shiant Isles Sill, Dr. H. I. Drever, **59**, 276
PILLINER, A. E. G., Standardisation errors of Moray House verbal reasoning tests, **59**, 292
Pinewoods of Scotland and their significance for current forestry practice, Prof. H. M. Steven, **59**, 205, 297
Place-attitudes of intending teachers in Scotland, *see* Professional persons, geographical distribution of, Dr. R. H. Osborne, Dr. R. Jones, **59**, 283
Pliocene Platforms and Incised Meanders, Dr. A. Lamont, **59**, 277
P–N junctions, preparation and properties of, Dr. E. G. James, **59**, 269
P–N junctions and transistors, G. King, **59**, 270
POLGE, Dr. C., Freezing and storage of sperm, **59**, 278, **60**, 409
Ports of W. Africa—some geographical considerations, H. P. White, **59**, 282
POWELL, H. M., How molecules fit together, **59**, 273, **60**, 351
POWELL, Dr. R. W., Applications of a thermal comparator, **59**, 269
Pre-Cambrian rocks of southern Co. Wicklow, Dr. W. E. Tremlett, **59**, 277
Presentation of science, **59**, 244, 245, 302
introduction, Lord Boyd Orr, **59**, 244, 302
to adult audiences, P. Ritchie Calder, **59**, 244, 302
to junior audiences, M. Morris, **59**, 244, 302

Presentation of science—*continued*
by scientists to scientists in differing subjects, L. J. F. Brimble, **59**, 244, 302
through medium of television, Miss F. R. Elwell, **59**, 245, 302
PRESSEY, Dr. B. G., Marine radio navigational aids, **59**, 286
Primitive beliefs and customs in the modern world, **59**, 287
folk customs in Wales, T. M. Owen, **59**, 287
traditional Scottish beliefs in the modern age, C. I. Maclean, **59**, 287
Professional persons, geographical distribution of: with special reference to place-attitudes of intending teachers in Scotland, Dr. R. H. Osborne, Dr. R. Jones, **59**, 283
PROUDFOOT, Dr. V. B., Clachans in Ireland, **59**, 282, **60**, 336
Psychology, educational, *see* Educational psychology, usefulness to the teacher, **59**, 291, 299
Psychology, occupational, research papers, **59**, 292
fault-finding, H. Dale, **59**, 293
inspector-workman relationship, R. M. McKenzie, **59** 292
retirement: a critical phase in the life of man, **59**, 293
selection of ship-building and marine engineering apprentices, J. G. M'Comisky, Dr. P. P. Daws, **59**, 292
Psychology, social, research papers on, **59**, 293
kinship, social class and old age in a London suburb, P. Willmott, **59**, 293
literature on the family in post-war Britain, analysis of, Dr. J. Klein, **59**, 293
personal problems and social change in Ghana, Dr. G. Jahoda, **59**, 293
in the United States, Dr. H. E. Page, **59**, 293
Psychology, usefulness to the teacher, *see* Educational psychology, usefulness to the teacher, **59**, 291, 299
Pteridophyta, morphological and cytological studies, **59**, 294
cytology of, Prof. I. Manton, **59**, 294
embryonic tissue in ferns, reflections on the unity of, Prof. C. W. Wardlaw, **59**, 294
morphology, persisting problems of, Dr. S. Williams, **59** 294

Quanta, physics of, **59**, 269
non-conservation of parity, Prof. J. C. Gunn, **59**, 269
physics of, Prof. P. I. Dee, **59**, 269
techniques and uses of millimicrosecond measurements, Dr. J. G. Rutherglen, **59**, 269
use of in nuclear investigations, J. M. Reid, **59**, 269
Quartz girdles, aspects of evolution of, A. L. Harris, **59**, 278

Radio waves for position finding and navigation, use of, **59**, 286
general problems, Dr. R. L. Smith-Rose, **59**, 286
marine navigational aids, Dr. B. G. Pressey, **59**, 286
radio aids to aeronautical navigation, special problems of, Caradoc Williams, **59**, 286
RAINNIE, G. F., Competition in the woollen and worsted industry, **59**, 284
RAMAGE, H. P., Physiology in schools, **59**, 290, **61**, 440
RAMSAY, D. M., Deformation studies in the Carn Mairg Quartzite of Glen Lyon, **59**, 277
RAST, Dr. N., Succession and sedimentary facies in Dalradian rocks of Western Scotland, **59**, 277
RAVEN, J. C., Verbal disfunction in mental illness: a comparative study, **59**, 294
RAVENHILL, Dr. W. L. D., Celtic and Early English settlement of Cornwall and Devon, **59**, 283, **60**, 342
READ, W. A., Scottish Carboniferous 'Red Beds': survey of recent work, **59**, 275
Reasoning, effect of prejudice on, Dr. R. H. Thouless, **59**, 291
Rectifiers, design and performance of semi-conductor junction, Dr. J. Shields, **59**, 269
REID, J. M., Use of high-energy quanta in nuclear investigations, **59**, 269
REISING, G. F. S., Experimental determination of heat transfer and pressure loss with gas flow across banks of tubes, **59**, 285
RENDLE, B. J., Coniferous timber: some anatomical considerations, **59**, 298
Reptilia, circulation in, and Amphibia, Prof. G. E. H. Foxon, **59**, 279
Research Committees, 1958–59, **59**, 220, 260
Resistance in living organisms, nature and genetical control of, **59**, 295
genetic basis of resistance mechanisms in mosquitoes, Miss C. E. Jackson, **59**, 295
of host and pathogen among diseases of higher plants, Dr. R. P. Day, **59**, 295
of resistance in bacteria, Dr. M. Barber, **59**, 295
resistance to virus diseases, Dr. A. Kleczkowski, **59**, 295
Rhum, harrisitic cumulites of, W. J. Wadsworth, **59**, 276
RIBBONS, B. W., Field Studies in the Loch Katrine area: Scottish Field Studies Association. Flora of the Trossachs, **59**, 244, 302
RICHARDS, E. G., Coniferous timber: market trends **59**, 298
ROBERTS, Sir James Denby, Landowner's view of integration of agriculture and forestry, **59**, 297
ROBERTSON, Dr. J. D., Origin of vertebrates—marine or freshwater? **59**, 279, **61**, 516
ROBERTSON, Sir James J., Education in a technological age: lesser and greater tasks, **59**, 299
ROBERTSON, Prof. J. Monteath, Measurement of molecules by X-rays, **59**, 273, **60**, 351
ROBYNS, Prof. W., Some problems in the tropical Afromontane flora, **59**, 294, **60**, 323
RODGER, Miss M., Job satisfaction, **59**, 299
ROOK, Dr. J. A. F., Grass tetany, **59**, 300
ROSENHEAD, Prof. L., Teaching of mathematics for the age of science and technology, **59**, 272
ROSS, I. M., Applications of atomic and molecular resonance phenomena to microwave technology, **59**, 271
Rubber manufacturing industry in Britain, economic background to innovations in, Audrey G. Donnithorne, **59**, 284
Rural settlement, **59**, 282, **60**, 333
Chairman's introduction, Prof. H. J. Fleure, **59**, 282, **60**, 333
Celtic and Early English settlement of Cornwall and Devon, Dr. W. Ravenhill, **59**, 283, **60**, 342
clachans in Ireland, Dr. V. B. Proudfoot, **59**, 282, **60**, 336
evolution of in W. Scotland, Dr. H. Fairhurst, **59**, 282, **60**, 334
introduction, Prof. E. Estyn Evans, **60**, 333
in Wales, Glanville R. J. Jones, **59**, 282, **60**, 338
RUSHTON, Dr. W. A. H., Chemical basis of human colour vision, **59**, 231, 291
RUTHERGLEN, Dr. J. G., Techniques and uses of millimicrosecond measurements, **59**, 269

Salt and water balance in animal life, **59**, 279, 289
differentiation, role of vitamin A, Dr. Honor B. Fell, **59**, 289
migration in lampreys, Dr. R. Morris, **59**, 279
secretory activity, relation of cell structure to, Dr. T. Vickers, **59**, 289
sodium balance in some decapod Crustacea, Dr. J. Shaw, **59**, 279
vertebrates, origin of—marine or freshwater? Dr. J. D. Robertson, **59**, 279, **61**, 516
SAUNDERS, Dr. B. C., Physiological properties of toxic organic compounds containing fluorine, **59**, 274
SAUNDERS, Prof. O. A., Heat and the engineer, **58**, 76, **59**, 285
Sceptre: theory and experiment, B. S. Liley, **59**, 270
SCHAFFER, H. R., Role of social environment in early personality development, **59**, 294
Schizophrenics dealing with complex tasks, slowness of, Dr. P. H. Venables, **59**, 291
SCHOVE, D. Justin, Tree-rings, climatic chronology and historical geography, **59**, 281
Science and Business: a balanced partnership, Sir Alexander Fleck, **58**, 3
Science by the upper form, **59**, 245, 302
breeding habits of the hen harrier in south-western Perthshire, D. W. McCredie, **59**, 245, 303
plant ecology of heather, moor and bog, A. M. J. Hutchings, A. J. Nicholl, **59**, 245, 303
production of special steels, A. Nichol, **59**, 245, 303
work of 'Discovery II', J. C. Natzio, **59**, 245, 303
Scientific co-operation within the Commonwealth, H.R.H. The Duke of Edinburgh, **60**, 314
Scotland, 'Description of' prior to 'Statistical Accounts', F. V. Emery, **59**, 282

Scotland, geophysical investigation of Tertiary volcanic centres of, J. Tuson, **59**, 277
Scotland, local archaeology, **59**, 286, 287
Iron Age in south Scotland: aspects of, J. Clarke, **59**, 287
Stone Age to Bronze Age in south-west Scotland, J. G. Scott, **59**, 287
Stone Age, recent researches into R. G. Livens, **59**, 286
Scotland, local societies and archaeological research, J.G. Scott, **59**, 245, 302
Scotland, native pinewoods of, and their significance for current forestry practice, Prof. H. M. Steven, **59**, 205, 297
Scotland, professional persons, geographical distribution, with reference to place-attitudes of teachers, *see* Professional persons, geographical distribution of, Dr. R. H. Osborne, Dr. R. Jones, **59**, 283
Scotland, rural development surveys in, M. A. M. Dickie, **59**, 298
Scotland, soils, **59**, 296
forest soils in, Dr. T. W. Wright, **59**, 296
mineralogical aspects of soil types, W. A. Mitchell, **59**, 297
review of distribution of soil types, Dr. R. Glentworth, **59**, 296
trace element problems, Dr. R. L. Mitchell, **59**, 297
Scotland, 'Statistical Accounts' of Parish, County and Nation: c. 1790–1824 and 1836–40, Dr. Arthur Geddes, **59**, 282
Scotland, vegetation in, Dr. S. Williams, **59**, 295
Scotland, water resources and needs, **59**, 282
hydro-electric development in Scotland, P. L. Aitken, **59**, 282
industry in relation to water supply, L. B. Aitken, **59**, 282
river flow and floods, measuring and estimating, P.O. Wolf, **59**, 282
river-flow studies, need for, Dr. R. Maclagan Gorrie, **59**, 282
water conservation, evaporation and land use in, F. H. W. Green, **59**, 282
Scotland, Western, succession and sedimentary facies in Dalradian rocks of, Dr. N. Rast, Dr. A. J. Smith, **59**, 277, *see* also Highland Schists, **59**, 277
SCOTT, J. G., Local societies and archaeological research in Scotland, **59**, 245, 302
Stone Age to Bronze Age in S.W. Scotland, **59**, 287
Scottish Carboniferous 'Red Beds': survey of recent work, E. H. Francis, G. I. Lumsden, W. Mykura, W. A. Read, W. Tulloch, **59**, 275
Scottish flora: **59**, 296
flowering plants, Prof. J. R. Matthews, **59**, 296
marine algae in Scotland, Dr. Elsie Conway, **59**, 296
mycological flora, Dr. C. E. Foister, **59**, 296
Scottish plants, R. Mackechnie, **59**, 296
Scottish hydro-electric tunnels, the occurrence of 'slides' in, G. S. Johnstone, **59**, 277, *see also* Highland Schists, **59**, 277
Scottish soils, *see* Scotland, soils, **59**, 296
Scottish universities, geography in medieval, Prof. A. Stevens, **59**, 282
Sectional transactions, **59**, 269
Seeds, *see* Early seeds and ovules, **59**, 294
Seismological investigations, sixty-third annual report of the Committee, **59**, 237
British earthquakes, E. Tillotson, **59**, 241
Edinburgh seismograms, **59**, 243
European seismological commission, E. Tillotson, **59**, 242
geodesy and geophysics at Cambridge University, B. C. Browne, **59**, 239
imperfections of elasticity in the shell, Sir H. Jeffreys, **59**, 240
in the International Geophysical Year, Dr. R. Stoneley, **59**, 241
international summary, Dr. R. Stoneley, J. S. Hughes, **59**, 238
at Kew Observatory, 1957–8, Dr. K. H. Stewart, **59**, 239
Oceanography, National Institute of, Dr. G. E. R. Deacon, **59**, 240
P about 20°, times of, Sir H. Jeffreys, **59**, 240
'Service' industries in N.-E. England, pattern of, B. Fullerton, **59**, 283
SHAW, Miss A. G., Training of girls, **59**, 299
SHAW, Dr. J., Sodium balance in some decapod Crustacea, **59**, 279
Shiant Isles Sill, picritic facies of, Dr. H. I. Drever, **59**, 276
SHIELDS, Dr. J., Design and performance of semi-conductor junction rectifiers, **59**, 269
SILBERSTON, A., Competition and monopoly in the motor industry, **59**, 283
Silicones: an introduction to their chemistry and applications, Dr. G. G. Freeman, **59**, 272, **60**, 397
SINNHUBER, Dr. Karl A., Primeval landscape of Middle Europe: Gradmann's steppe-heath theory re-examined, **59**, 282
Skye, ultrabasic rocks in, D. S. Weedon, **59**, 276
SMITH, Dr. A. J., Succession and sedimentary facies in Dalradian rocks of Western Scotland, **59**, 277
SMITH, Dr. Audrey U., Resuscitation of frozen mammals, **59**, 278, **60**, 409
SMITH, D. L., Lower Carboniferous fructifications from the Kilpatrick Hills, **59**, 295
SMITH, Prof. W. O. Lester, Reflections on the professional education of teachers, **59**, 300 **60**, 329
SMITH-ROSE, Dr. R. L., General problems of radio position-finding, **59**, 286
SMOUT, Dr. A. H., Microfacies, **59**, 276
SMYTH, Prof. D. H., Training of physiologists, **59**, 290, **61**, 449
SNEDDON, Prof. I. N., Mathematics in Glasgow in the eighteenth century, **59**, 271
Social environment, role of, in early personality development, H. R. Schaffer, Miss W. M. Callender, **59**, 294
Soils during shear, behaviour of, C. P. Wroth, **59**, 285
Speech, sound and, **59**, 289
electromyography of intrinsic laryngeal muscles in man, Prof. F. Buchthal, **59**, 289
function of the palate and pharynx in, J. Calnan, **59**, 289
as a physiological process, P. Ladefoged, **59**, 289
respiratory muscles and, Prof. D. Whitteridge, **59**, 289
Standardisation errors of Moray House verbal reasoning tests, A. E. G. Pilliner, **59**, 292
'Statistical Accounts', 'Description of Scotland' prior to, F. V. Emery, **59**, 282, *see also* Scotland 'Statistical Accounts' of Parish, County and Nation, Dr. Arthur Geddes, **59**, 282
STEEDMAN, Dr. H. F., Cutting of sections, **59**, 279
STEVEN, Prof. H. M., Native pinewoods of Scotland and their significance for current forestry practice, **59**, 205, 297
STEVENS, Prof. A., Geography in medieval Scottish universities, **59**, 282
STEVENS, Dr. K. W. H., Application of micro-wave physics to the study of solid shapes, **59**, 271
STEWART, Dr. K. H., Seismology at Kew Observatory, 1957–8, **59**, 239
STEWART, Group Capt. W. K., Continuum of aviation physiology, **59**, 290
STOKER, Dr. M. G. P., Intimate lives revealed: the general characteristics of viruses, **59**, 288
STONELEY, Dr. R., International seismological summary, **59**, 238
seismology in the International Geophysical Year, **59**, 241
STORRIE, Miss Margaret, Islay: a Hebridean exception, **59**, 283
STOTT, Dr. D. H., Boys on probation: maladjusted or normal? **59**, 293, **61**, 497
STRANGE, P., Vector Loci, **59**, 286
Student Day, **59**, 299
antidotes to apathy, Dr. F. Crawford, **59**, 299
Hall of Residence, Prof. W. R. Niblett, **59**, 299
SWINTON, Dr. W. E., Charles Darwin in Scotland, **59**, 201, 244, 302
SYMONS, Leslie, Kintyre: a Highland exception, **59**, 283

TABOR, Dr. D., Rolling, skidding and sliding, **59**, 270
Tanganyika Territory, changing regional advantages in Bukoba district of, D. N. McMaster, **59**, 282
TATLOW, Dr. J. C., Fluorocarbons: a new branch of organic chemistry, **59**, 274
TAYLOR, Dr. D., Special instrumentation problems associated with nuclear power stations, **59**, 285
TAYLOR-RUSSELL, A. J., Aerodynamics of wakes, **59**, 286
Technical ideas in a small-firm industry, development and use of, H. C. Baker, **59**, 294

Techniques in modern society, simple and advanced, **59**, 287
retention of simple agricultural techniques, F. G. Payne, **59**, 288
rural industry in modern Ulster society, G. B. Thompson, **59**, 288
sledges and wheeled vehicles, J. G. Jenkins, **59**, 288
traditional techniques in modern Scottish farming, Dr. I. Whitaker, **59**, 287
Tertiary volcanic centres of Scotland, geophysical investigation of, J. Tuson, **59**, 277
Thermal comparator, applications of, Dr. R. W. Powell, **59**, 269
Thermo-nuclear research, some aspects of, Dr. T. E. Allibone, **58**, 13, **59**, 270
THOM, J. R., Value of improved tree seed and quality control in forest practice, **59**, 297
THOMPSON, G. B., Rural industry in modern Ulster society, **59**, 288
THOULESS, Dr. R. H., Effect of prejudice on reasoning, **59**, 291
TILLOTSON, E., British earthquakes, **59**, 241
European seismological commission, **59**, 242
Transuranic elements, Prof. H. J. Emeleus, **58**, 23, **59**, 272
Treasurer's statement and account, 1957–58, **59**, 246
Tree-rings, climatic chronology and historical geography, D. Justin Schove, **59**, 281
TREMLETT, Dr. W. E., Pre-Cambrian rocks of southern Co. Wicklow, **59**, 277
Tropical Afromontane Flora, some problems in, Prof. W. Robyns, **59**, 294, **60**, 323
TULLOCH, W., Scottish Carboniferous 'Red Beds': survey of recent work, **59**, 275
TUSON, J., Geophysical investigation of Tertiary volcanic centres of Scotland, **59**, 277

U.S.A., *see* Social-psychological research in, **59**, 293

Value judgments in old age, development study of, Dr. A. J. Weir, **59**, 294
Vector Loci, P. Strange, **59**, 286
Vegetation of Scotland, Dr. S. Williams, **59**, 295
VENABLES, Dr. P. H., Slowness of schizophrenics in dealing with complex tasks, **59**, 291
Verbal disfunction in mental illness: a comparative study, J. C. Raven, **59**, 294
VICK, Prof. F. A., Education in a technological age: the university aspect, **59**, 298
VICKERS, Dr. T., Relation of cell structure to secretory activity, **59**, 289
Viruses, nature of, **59**, 288
construction of a bacterial virus, Dr. S. Brenner, **59**, 288
how to interfere with, Dr. A. Isaacs, **59**, 288
intimate lives revealed: general characteristics of, Dr. M. G. P. Stoker, **59**, 288
Visual aids and the presentation of science, **61**, 489
Harrogate, scientific films at, **61**, 489
reviews, **61**, 490
VOYSEY, R. G., Storage of energy, **59**, 285

WADSWORTH, W. J., Harrisitic cumulites of Rhum, **59**, 276
WAGER, Prof. J. R., Beneath the Earth's Crust, **58**, 31, **59**, 276
Wakes, aerodynamics of, A. J. Taylor-Russell, **59**, 286
Wales, folk customs in, T. M. Owen, **59**, 287
WALKER, J., Control of nuclear reactors, **59**, 285
WALTON, Prof. J., Structure and evolution of early seeds and ovules—introduction, **59**, 294
WANNOP, A. R., Review of hill farming problems, **59**, 189, 301
WARDLAW, Prof. C. W., Reflections on the unity of embryonic tissue in ferns, **59**, 294
WARDLAW, Prof. C. W. [the late], obituary, **60**, 424
Water in Scotland, resources and needs, *see* Scotland, water resources and needs, **59**, 282
Waterproofing of insects, new information, Dr. J. W. L. Beament, **59**, 279
WATSON, Dr. D. H., Molecules a million times larger than life, **59**, 273, **61**, 507
WATT, A., Management of fast-grown conifers, **59**, 298
WEBSTER, A. B., Effect of environment on economics of chrysanthemum growing, **59**, 301
WEEDON, D. S., Ultrabasic rocks in Skye, **59**, 276
WEIR, Dr. A. J., Development study of value judgments in old age, **59**, 294
WELLINGS, F. E., Contribution of geology to discovery and development of oilfields, **59**, 276
WHITAKER, Dr. F. P. G., Teaching of management subjects in British universities, **59**, 284
WHITAKER, Dr. I., Traditional techniques in modern Scottish farming, **59**, 287
WHITE, H. P., Ports of W. Africa—some geographical considerations, **59**, 282
WHITESIDE, Sqn. Ldr. T. C. D., Future problems in aviation physiology, **59**, 290
WHITTERIDGE, Prof. D., Respiratory muscles and speech, **59**, 289
Wicklow, Pre-Cambrian rocks of southern Co., Dr. W. E. Tremlett, **59**, 277
WILKINS, L. T., Patterns of post-war juvenile and young adult crime, **59**, 293, **61**, 497
WILLIAMS, Caradoc, Special problems of radio aids to aeronautical navigation, **59**, 286
WILLIAMS, Dr. C. G., Lubrication in the nuclear age, **59**, 270
WILLIAMS, Dr. S., Persisting problems of morphology, **59**, 294
Vegetation of Scotland, **59**, 295
WILLMER, Dr. E. N., some aspects of cellular differentiation, **58**, 95, **59**, 289
Metaplasia in an Amoeba (film), **59**, 289
WILLMOTT, P., Kinship, social class and old age in a London suburb, **59**, 293
WILSON, A. L., Health in hill flocks, **59**, 189, 196, 301
WILSON, R. Finlay, Coniferous timber: utilisation and saw-milling industry, **59**, 298
Windermere
algae of, investigations on, Dr. J. W. G. Lund
experiments with fish populations in, E. D. Le Cren
See Freshwater Biological Association, work of, **59**, 280, 296
WISEMAN, J., Economics of education in Britain, **59**, 283
WISEMAN, Dr. S., Educational psychology in retrospect, **59**, 292, 299
WOLF, P. O., Measuring river flow and estimating floods, **59**, 282
Woollen industry, competition in, G. F. Rainnie, **59**, 284
WRIGHT, Dr. T. W., Forest soils in Scotland, **59**, 296
WROTH, C. P., Behaviour of soils during shear, **59**, 285
WYBURN, Prof. G. M., Biological fabrics, **59**, 279

YONGE, Prof. C. M., Form and biology of coral reefs, **59**, 279
Form and evolution in Mollusca, **59**, 280

'Zeta'—experiments to determine properties of plasma at thermonuclear temperatures, R. W. P. McWhirter, **59**, 270
Zoological films, **59**, 279, 281
Breeding periodicity and related problems of two vertebrate animals in equatorial Borneo, T. Harrisson, **59**, 280
New microscopic filming methods, Dr. E. J. Ambrose, **59**, 281
Young Budgerigars, Sister Marie Josephine, **59**, 279

4
cotland,
. W. L
ger than
, 298
omics of
ments in
iscovery
ent sub-
modern
raphical
lems in
speech,
r. W. E.
d young
aids to
age, 59,
ogy, 59,
fferenti-
a Lon-
301
ion and
Cren
59, 280,
ain, 59,
rospect,
floods,
nie, 59,
296
285
eefs, 59,
asma at
ter, 59,
of two
Harris-
mbrose,
279